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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,790	12/09/2003	Hodaka Norimatsu	O104420009	4813

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EXAMINER

COLLINS, DARRYL J

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/730,790

Applicant(s)

NORIMATSU, HODAKA

Examiner

Darryl J. Collins

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 3,4,8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03082004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

### DETAILED ACTION

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Koshi (U.S. Patent Number 6,796,145). Koshi teaches a rod block comprising a plurality of rods having an end face wherein the rods are arranged in parallel to one another on at least one flat plane, a holding frame holding the rods (Figure 1) and a resin material fixing the rods and the holding frame ((column 2, lines 57-59) as claimed in independent claim 10. Koshi also teaches such a rod block further comprising a rod being a base material for producing a predetermined gradient index rod lens (column 1, lines 6-11) as claimed in dependent claim 11, a holding frame having side glass plates and two holding glass plates holding the rod and the side plates (Figure 1, elements 13, 14, 15 and 16) as claimed in dependent claim 12.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshi (U.S. Patent Number 6,796,145) in view of Go (U.S. Patent Number 5,513,295). Koshi teaches a method of manufacturing a rod wherein a plurality of rods are (Figure 1) integrally fixed with a resin (column 2, lines 57-59) so as to have their axis running in parallel to one another, cutting the rods into a predetermined length (column 6, lines 43-49) and polishing the cut end faces (column 6, lines 43-45) as claimed in independent claim 1 and further teaches separating the rods from one another by removing the resin (column 6, lines 66-67) as claimed in independent claim 6. Koshi further teaches each rod having a circular cross section, aligned in parallel and in contact with one another (Figure 1) as claimed in dependent claim 2, wherein the rods have a predetermined refractive index distribution (column 2, lines 34-37) as claimed in dependent claims 5 and 7, but fails to teach the manufacturing of a rod having an optical thin film. Go, however, teaches a fiber optic holder for holding and aligning many optical fibers that are processed in a high vacuum environment required to form thin film onto the optical fibers' cleaved ends (column 1, lines 15-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the well known manufacturing method of cutting and polishing a mother rod as taught by Koshi combined with the very well known technique of applying a thin film to an optical rod or fiber as taught by Go to achieve a more efficient way to mass produce grin lenses.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshi (U.S. Patent Number 6,796,145) as applied to claims 10-12 above and further in view of Go

(U.S. Patent Number 5,513,295). Although Koshi teaches all of the claimed limitations as outlined above, Koshi fails to explicitly teach the use of a thermoplastic resin having a melting point higher than that of the optical thin film, the prior art teaches that the resin (Figure 4, element 23) must be heated so that the rod lenses may be separated suggesting that any heat generated via the forming process is insufficient to release the rods from this bond. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a resin having a higher melting point than the thin film such that the rods remained in place during manufacture.

#### *Allowable Subject Matter*

Claims 3, 4, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. Although the prior art teaches a method of manufacturing a rod with an optical thin lens as outlined above, the prior art fails to teach the separation of the rods from one another by dissolving or swelling the resin with a solvent as claimed in dependent claim 3 nor does it teach the manufacturing of a rod arranged along a sheet made of resin wherein the resin is melted and then hardened to fix the rods to one another and the resin.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darryl J. Collins whose telephone number is 571-272-2325. The examiner can normally be reached on 6:30 - 5:00 Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Darryl J. Collins  
16 March 2006



Scott J. Sugarman  
Primary Examiner